



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,400	07/09/2003	Herbert Busse	7116-1	8469

39196 7590 07/14/2005

SHLESINGER, ARKWRIGHT & GARVEY LLP  
1420 KING STREET  
SUITE 600  
ALEXANDRIA, VA 22314

EXAMINER

PATEL, VISHAL A

ART UNIT	PAPER NUMBER
----------	--------------

3679

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/615,400

Applicant(s)

BUSSE ET AL.

Examiner

Vishal Patel

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 May 2005.
- 2a) ☒ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-33 is/are pending in the application.
- 4a) Of the above claim(s) 19, 23, 25-31 and 33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-18, 20, 24 and 32 is/are rejected.
- 7) ☒ Claim(s) 21 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| <p>1) <input type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br/>Paper No(s)/Mail Date _____.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)<br/>Paper No(s)/Mail Date. _____.</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>6) <input type="checkbox"/> Other: _____.</p> |
|---|--|

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 15, 24 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Richards (US. 4,976,444).

Regarding claim 15: Richards discloses a low friction seal assembly comprising a guide element (12) for guiding a shaft (intended use but 42 considered as a shaft), the guide element having a groove (groove holding seal ring 72) extending therein, the groove having a bottom wall (wall contacting 104) and a first side wall (side wall contacting a seal 106), a sealing ring received within the groove, the sealing ring having a cylindrical inner surface (cylindrical inner surface having grooves 96-98) adapted to be positioned adjacent a shaft surface to be sealed (intended use but the sealing ring is used to seal 42), an end face (face holding the seal 106) disposed adjacent the groove first side wall and an outer cylindrical surface (surface holding 104) disposed adjacent the groove bottom wall, a seal (106) disposed between the sealing ring end face and the groove first side wall so that any pressure occurring between the groove bottom wall and the sealing ring outer cylindrical surface is maintained less than the pressure between the shaft and the guide element (pressure is restricted from flowing across the end face of the seal ring by the seal 106).

The seal has a width that is larger than a gap between the first side wall of the groove and the end face of the seal ring. The seal is charged with a pressure medium.

Regarding claim 24: The seal ring having a second side wall (wall 80) associated with the guide element groove, a drainage channel (as showed in figure 5 which includes all the limitations of claim 15) operatively associated with the second side wall and extending outwardly through the guide element from the second side wall (the drainage channel extends thorough the seal ring and the guide element).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 16-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richards in view of Lindeboom (US. 3,743,304).

Richard discloses the invention substantially as claimed above but fails to disclose that the seal comprises a formed part and a plastic sealing ring. Lindeboom discloses a seal ring, the seal ring has a side wall (side wall having groove 54) having a groove (54) that holds a seal (seal formed by 66 and 68), the seal comprising a formed part (64) made of plastic or rubber material and a plastic ring (66) and the seal is deformed by a pressure in a system having the seal ring. It would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the seal of Richards to have a formed part and a plastic ring as taught by

Art Unit: 3679

Lindeboom, to provide seals under high pressure and temperatures (column 3, lines 32-46 of Lindeboom).

***Allowable Subject Matter***

5. Claims 21-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

6. Applicant's arguments filed 5/6/05 have been fully considered but they are not persuasive.

Applicants' argument that Richard does not disclose the inner axial wall to be adjacent to the shaft is not persuasive because applicant has not claimed the shaft and is considered to be intended use limitation. Furthermore the inner axial wall is adjacent to the shaft which is 42 that has a surface that is next to both the axial wall and inner walls.

Applicants' argument that Richard fails to disclose that a seal is placed between the side wall of the guide element and the seal ring end face is not persuasive because the seal 60 of Richard is between the guide element side wall which is above the seal ring end face. Furthermore this seal 60 prevents flow of fluid between the guide element inner wall that is opposite the outer wall 76 of the seal ring.

Applicants' argument that Richard does not teach the above limitations because of Column 4, lines 15-16 and 24-25 is not persuasive because the seal is between the impeller, the housing and the reservoir.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is 571-272-7060. The examiner can normally be reached on 6:30am to 8:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3679

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP  
July 8, 2005

A handwritten signature in black ink, appearing to read "Vishal Patel", with a stylized flourish at the end.

Vishal Patel  
Patent Examiner  
Tech. Center 3600